

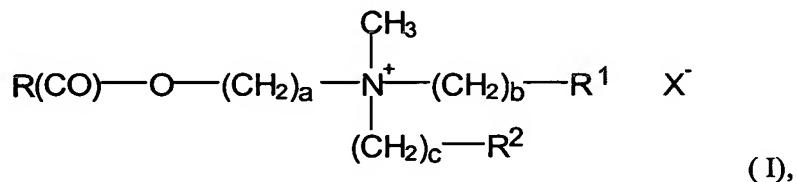
CLAIMS

1. Use of a microemulsion, comprising
 - a) oil(s)
 - and an
 - b) emulsifier system of at least one hydrophilic as well as at least one lipophilic emulsifier,
for fabric treatment in an automatic washing machine.
2. Use according to claim 1 in the rinse cycle of an automatic washing machine.
3. Use according to one of claims 1 or 2, wherein the microemulsion has a droplet size d_{50} of less than 500 nm.
4. Use according to one of claims 1 to 3, wherein the droplet size d_{50} of the microemulsion is not greater than 400 nm, preferably not greater than 300 nm, advantageously not greater than 250 nm, further advantageously not greater than 200 nm, even more advantageously not greater than 150 nm, in particular does not exceed a value of 100 nm.
5. Use according to one of claims 1 or 4, wherein the droplet size d_{50} of the microemulsion is not less than 10 nm, preferably not less than 25 nm, advantageously not less than 40 nm, in particular is not below a value of 60 nm.
6. Use according to one of claims 1 to 5, wherein the microemulsion comprises a cationic polymer, preferably in amounts of less than 10 wt.%, advantageously less than 5 wt.%, further advantageously in amounts of less than 3 wt.%, even more advantageously in amounts of less than 1 wt.%, in particular, however, in amounts of less than 0.5 wt.%, wherein preferably a lower limit of 0.05 wt.%, advantageously 0.1 wt.% is not exceeded.
7. Use according to claim 6, wherein the cationic polymer are polymeric quaternary ammonium compounds, preferably selected from copolymers of quaternized vinyl imidazole and vinyl pyrrolidone, copolymers of vinyl caprolactam, vinyl

pyrrolidone and quaternized vinyl imidazole and/or quaternized copolymers of vinyl pyrrolidone and dimethylaminoethyl methacrylates.

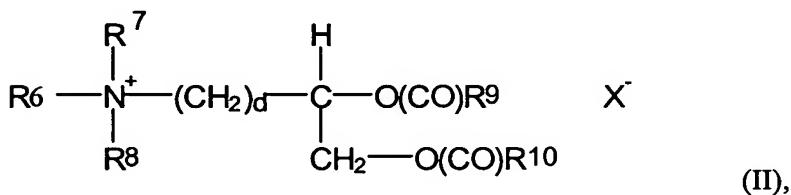
8. Use according to one of claims 1 to 7, wherein the microemulsion comprises sequestering agents, preferably selected from the group of citrates, citric acid, gluconates, gluconic acid, phosphates, phosphonates, carboxylates, ethylenediaminetetraacetic acid and/or its salts, nitrilotriacetic acid and/or its salts, diethylenetriaminepentaacetic acid and/or its salts, propylenediaminetetraacetic acid and/or its salts, alaninediacetic acid and/or its salts, methylglycinediacetic acid and/or its salts, iminodisuccinic acid and/or its salts, and/or the trisodium salt of the ethylenediamine-N,N'-disuccinic acid, wherein the citrates and/or citric acid are the most preferred.
9. Use according to claim 8, wherein the microemulsion comprises the sequestering agent in amounts of at least 1.5 wt.%, advantageously at least 2.5 wt.%, further advantageously in amounts of at least 4 wt.%, even more advantageously in amounts of at least 6 wt.%, in particular, however, in amounts of at least 7.5 wt.%, wherein preferably an upper limit of 25 wt.%, advantageously 20 wt.%, further advantageously of 17 wt.%, even more advantageously of 15 wt.%, particularly 12 wt.% is not exceeded.
10. Use according to one of claims 1 to 9, wherein at least citrate(s) and/or at least citric acid are comprised as the sequestering agent in the microemulsion, preferably exclusively citrate(s) and/or citric acid, wherein the citrate(s) and/or citric acid are advantageously comprised in amounts of 1 wt.% to 16 wt.%.
11. Use according to one of claims 1 to 10, wherein the oil comprised in the microemulsion is selected from the group of the totally synthetic oils, here preferably silicone oils, of natural oils, here preferably vegetal and/or animal fatty oils, and/or ethereal oils.
12. Use according to one of claims 1 to 11, wherein the emulsifiers comprised in the microemulsion are selected from the group of cationic, non-ionic, zwitterionic, ampholytic and/or anionic emulsifiers.

13. Use according to one of claims 1 to 12, wherein at least one cationic emulsifier is comprised in the microemulsion, advantageously a lipophilic cationic emulsifier.
14. Use according to one of claims 1 to 13, wherein at least one non-ionic emulsifier is comprised in the microemulsion, in particular a hydrophilic non-ionic emulsifier, wherein if a cationic emulsifier is comprised at the same time, the weight ratio of cationic to non-ionic emulsifier is advantageously in the range 70: 1 to 3: 1, particularly 50: 1 to 8: 1, preferably 30: 1 to 10: 1, and particularly preferably 20: 1 to 12: 1.
15. Use according to claim 14, wherein the non-ionic emulsifier comprised in the microemulsion is selected from ethoxylated fatty alcohols and/or ethoxylated fatty acid alkanolamides.
16. Use according to claim 13, wherein the cationic emulsifiers comprised in the microemulsion are quaternary ammonium compounds, advantageously alkylated quaternary ammonium compounds, preferably with one, two or three hydrophobic groups that are in particular linked through ester or amido bonds with a quaternised di- or triethanolamine or an analogous compound.
17. Use according to one of claims 13 or 16, wherein the cationic emulsifier comprised in the microemulsion is a quaternary ammonium compound selected from the following Formulae (I)



wherein R stands for an aliphatic group with 12 to 22 carbon atoms with 0, 1, 2 or 3 double bonds; R¹ stands for H, OH or particularly O(CO)R⁴, R² stands independently of R¹ for H, OH or O(CO)R⁵, wherein R⁴ and R⁵ independently of

one another each stands for an aliphatic alkyl group with 12 to 22 carbon atoms with 0, 1, 2 or 3 double bonds, a, b and c independently of each other can each have the value 1, 2 or 3, X^- is a suitable anion, preferably a halide, methosulfate, methophosphate or phosphate ion as well as mixtures thereof, and/or the Formula (II):



wherein R^6 , R^7 and R^8 independently of one another stand for a C_{1-4} alkyl, alkenyl or hydroxyalkyl group, R^9 and R^{10} , each independently selected, represents a C_{8-28} alkyl group with 0, 1, 2 or 3 double bonds and a is a number between 0 and 5, X^- is a suitable anion, preferably a halide, methosulfate, methophosphate or phosphate ion as well as mixtures thereof.

18. Use according to one of claims 13, 16 or 17, wherein the cationic emulsifier comprised in the microemulsion is N-methyl-N(2-hydroxyethyl)-N,N-(ditallowacyloxyethyl)ammonium methosulfate or N-methyl-N(2-hydroxyethyl)-N,N-(dipalmitoylethyl)ammonium methosulfate.
19. Use according to one of claims 13, 16 – 18, wherein the microemulsion comprises less than 20 wt.%, preferably less than 15 wt.%, advantageously less than 10 wt.%, very advantageously less than 5 wt.%, further advantageously less than 4 wt.%, even further advantageously less than 3.5 wt.%, extremely advantageously less than 3 wt.%, exceedingly advantageously less than 2.5 wt.%, most advantageously less than 2 wt.%, at least, however, 0.1 wt.%, advantageously at least 0.5 wt.%, in particular at least 1 wt.% of cationic emulsifiers.
20. Use according to one of claims 14 or 15, wherein the microemulsion comprises less than 5 wt.%, preferably less than 3 wt.%, advantageously less than 2 wt.%, very advantageously less than 1.5 wt.%, further advantageously less than 1.0

wt.%, even further advantageously less than 0.75 wt.%, extremely advantageously less than 0.6 wt.%, exceedingly advantageously less than 0.45 wt.%, most advantageously less than 0.35 wt.%, at least, however, 0.15 wt.%, advantageously at least 0.2 wt.%, in particular at least 0.25 wt.% of non-ionic emulsifiers.

21. Use according to one of claims 1 to 20, wherein the microemulsion comprises at least 0.5 wt.%, preferably at least 2.5 wt.%, advantageously at least 5 wt.%, particularly 10 wt.%, however not more than 50 wt.%, preferably not more than 45 wt.%, advantageously not more than 40 wt.%, very advantageously not more than 35 wt.%, even more advantageously not more than 32 wt.%, exceedingly advantageously not more than 28 wt.%, most advantageously not more than 25 wt.% of oils, each based on the total agent.
22. Use according to one of claims 1 to 21, wherein the microemulsion comprises at least 0.05 wt.%, preferably at least 0.1 wt.%, advantageously at least 0.15 wt.%, particularly 0.2 wt.%, however not more than 3 wt.%, preferably not more than 2.5 wt.%, advantageously not more than 2.0 wt.%, very advantageously not more than 1.5 wt.%, even more advantageously not more than 1.0 wt.%, exceedingly advantageously not more than 0.75 wt.%, most advantageously not more than 0.5 wt.% of hydrophilic and/or lipophilic thickeners.
23. Use according to claim 22, wherein the thickener comprised in the microemulsion is selected from the group of the
 - a) polysaccharides, in particular xanthane gum, guar derivatives, gum arabicum, karaya gum, tragant, taragum, gellan, carrageen, locust bean flour, agar agar, alginates, pectins and/or dextrans,
 - b) organic synthetic thickeners, particularly polyacrylates, polyacrylamides, polyvinyl pyrrolidone, polyvinyl alcohol, polyethylene glycols, hydrophobically modified polyethers, polyurethanes, styrene-maleic anhydride copolymers, their salts and/or derivatives,
 - c) non-ionic and/or anionic cellulose derivatives, particularly hydroxyethyl cellulose, carboxymethyl cellulose, hydroxypropyl methyl cellulose, hydroxypropyl cellulose, ethyl hydroxyethyl cellulose, methyl cellulose,

- d) starch fractions and derivatives, particularly amylose, amylopectin and dextrins,
- e) clays, particularly bentonite.
- f) fatty acids, fatty alcohols, silicone oils, waxes
- g) mixtures of the above.

24. Use according to one of claims 1 to 23, wherein the microemulsion comprises at least 40 wt.%, however not more than 90 wt.%, preferably not more than 85 wt.%, advantageously not more than 80 wt.%, very advantageously not more than 75 wt.%, even more advantageously not more than 70 wt.%, exceedingly advantageously not more than 68 wt.%, most advantageously not more than 65 wt.% of water, each based on the total agent.

25. Use according to one of claims 1 to 24, wherein at least one of the oils comprised in the microemulsion has skin-protecting and/or skin-caring and/or skin-healing properties.

26. Use according to one of claims 1 to 25, wherein at least one of the oils comprised in the microemulsion is antiseptically active.

27. Use according to one of claims 1 to 26, wherein at least one of the oils comprised in the microemulsion exhibits a minimum content of α -linolenic acid of 0.1 wt.%, based on the oil in question, preferably at least one of the oils, particularly at least two of the oils being selected from hemp oil, borage oil, evening primrose oil, blackcurrant seed oil, echium oil, trichodesma oil and/or albarakka oil.

28. Use according to one of claims 1 to 27, wherein the pH of the microemulsion at a temperature of $T = 20$ °C, in particular measured on a 1% aqueous solution of microemulsion, is not greater than 6.5.

29. Use according to one of claims 1 to 28, wherein the microemulsion is exempt of colorant.

30. Use according to one of claims 1 to 29, wherein only natural aromas, however, preferably no additional fragrances or other perfume oils, are comprised in the microemulsion.
31. Use according to one of claims 1 to 30, wherein the microemulsion comprises an agent to facilitate ironing and/or reduce wrinkles.
32. Use according to one of claims 1 to 31, wherein the microemulsion comprises a deodorant.
33. Use according to one of claims 1 to 32, wherein the microemulsion comprises a terpene-containing extract of plants, preferably an extract of parts of plants from one or a plurality of plants from the family of the Myrtaceae.
34. Use according to one of claims 1 to 33, wherein the terpene-containing extract of plants is tea tree oil and is comprised in an amount of at least 0.006 wt.% to maximum 1 wt.% in the microemulsion.
35. Use according to one of claims 1 to 34, wherein the microemulsion comprises at least 0.03 wt.%, particularly 0.05 to 1 wt.% of natural antioxidants, in particular selected from terpene-containing antioxidants, vitamin E, vitamin A, vitamin C, selenium and/or their derivatives or mixtures of these.
36. Use according to one of claims 1 to 35, wherein an acidic buffer is comprised in the microemulsion, preferably an organic buffer system that buffers the microemulsion and the fabric treatment bath, preferably in a pH range of 2 to 6.5.
37. Use according to claim 36, wherein the buffer system comprises at least one acid, preferably selected from formic acid, citric acid, acetic acid, sulfonic acid – advantageously amidosulfonic acid – and/or their derivatives or mixtures thereof.
38. Use according to claim 37, wherein the buffer system comprises at least one salt of the acid(s) comprised in the buffer system, preferably sodium citrate.

39. Use according to one of claims 36 to 38, wherein the buffer system comprises polyacrylates, polymethacrylates and/or copolymers of acrylic acid and maleic acid, preferably with a molecular weight of 2000 to 10 000.
40. Use according to one of claims 1 to 39, wherein the microemulsion comprises non-aqueous solvent, preferably hydroxy derivatives of aliphatic and alicyclic hydrocarbons, in particular ethanol, advantageously in amounts greater than 0.5 wt.%, very advantageously in amounts greater than 1 wt.%, wherein, however, a maximum of 10 wt.%, preferably 7.5 wt.%, particularly 4 wt.% is not exceeded.
41. Use according to one of claims 1 to 40, wherein the microemulsion comprises formic acid and/or its salts, preferably in amounts smaller than 0.15 wt.%, advantageously smaller than 0.1 wt.% in particular smaller than 0.075 wt.%.
42. Use according to one of claims 1 to 41, wherein the microemulsion comprises lactic acid and/or its salts, preferably in amounts smaller than 5 wt.%, advantageously smaller than 3 wt.% in particular smaller than 2 wt.%.
43. Use according to one of claims 1 to 42, wherein such active materials are comprised in the microemulsion that are beneficial to the fiber elasticity, shape retention and tearing resistance of the fabric fibers, in particular aminosiloxanes, cellulose derivatives and/or carboxylic acid esters
44. Use according to one of claims 1 to 43, wherein the viscosity of the microemulsion is in the range 5 to 300 mPas, preferably between 20 and 180 mPas and particularly between 25 and 120 mPas, measured with the Brookfield-Viskosimeter DV II at 22 °C, 20 rpm, spindel 3.
45. Use according to one of claims 1 to 44, wherein the density of the microemulsion is in the range 0.900 to 1.050 g/cm³, preferably between 0.950 to 1.030 g/cm³ and particularly between 0.980 and 1.015 g/cm³ at 22 °C.
46. Fabric treatment agent, which comprises at least the components a) antioxidant b) at least one lipophilic emulsifier, c) at least one hydrophilic emulsifier, as well as

d) oils, wherein the agent is present as the microemulsion with a droplet size d_{50} below 500 nm, wherein it preferably comprises less than 5 wt.% of cationic surfactants.

47. Agent according to claim 46, wherein the lipophilic emulsifier is a cationic emulsifier.

48. Agent according to one of Claims 46 to 47, wherein the hydrophilic emulsifier is a non-ionic emulsifier.

49. Agent according to one of claims 46 to 48, wherein only natural antioxidants are comprised as the antioxidants, in particular selected from terpene-containing antioxidants, vitamin E, vitamin C, vitamin A, and/or selenium and/or their derivatives.

50. Agent according to one of claims 46 to 49 comprising citric acid and/or citrate(s).

51. Agent according to one of claims 46 to 50 comprising cationic polymer, advantageously in the form of polymeric quaternary ammonium compounds, particularly selected from copolymers of quaternized vinyl imidazole and vinyl pyrrolidone, copolymers of vinyl caprolactam, vinyl pyrrolidone and quaternized vinyl imidazole and/or quaternized copolymers of vinyl pyrrolidone and dimethylaminoethyl methacrylates.

52. Agent according to one of claims 46 to 51, wherein an acidic buffer is comprised, preferably an organic buffer system that buffers the microemulsion and the fabric treatment bath, particularly in a pH range of 3 to 5.5.

53. Agent according to claim 52, wherein the buffer system comprises acid, preferably selected from formic acid, citric acid, acetic acid, sulfonic acid – advantageously amidosulfonic acid – and/or their derivatives or mixtures thereof.

54. Agent according to claim 53, wherein the buffer system comprises at least one salt of the acid(s) comprised in the buffer system, preferably sodium citrate.

55. Agent according to one of claims 52 to 54, wherein the buffer system comprises polyacrylates, polymethacrylates and/or copolymers of acrylic acid and maleic acid, preferably with a molecular weight of 2000 to 10 000.
56. Use of an agent according to one of Claims 46 to 55 as an after treatment agent, in particular as the softener or rinse aid.
57. Use of an agent according to one of Claims 46 to 55 as a liquid detergent.